



ATTACHMENT A

Claims 1 - 28: (Cancelled)

29. (Currently Amended) A continuous process for polymerizing olefins in a fluidized bed reactor, said process comprising:

- continuously passing a gaseous stream comprising one or more α -olefin monomers through a fluidized bed with a polymerization catalyst under reactive conditions;

- withdrawing a polymeric product and unreacted fluids from said fluidized bed reactor;

- cooling part of said unreacted fluids below at least one dew point of said unreacted fluids to form a two-phase mixture comprising a gas and a condensed liquid; and

- reintroducing said two-phase mixture into said fluidized bed reactor,

wherein said two-phase mixture is reintroduced under a distribution plate of said fluidized bed reactor in a direction which is tangential to at least one reactor wall, such that at least one part of said condensed liquid is separated from said gas, and said condensed liquid is fed above said fluidized bed through an external pipe connecting a bottom of said fluidized bed reactor to a position above an

upper limit of said fluidized bed, the external pipe
comprising an inlet below the distribution plate.

30. (Previously Presented) The process according to claim 29, wherein a separated liquid collects at a zone underlying said distribution plate before entering said external pipe.

31. (Previously Presented) The process according to claim 29, wherein a separated liquid enters said external pipe, said separated liquid comprises from 20 to 50% by weight of said condensed liquid.

32. (Previously Presented) The process according to claim 31, wherein said separated liquid flows upward in said external pipe without requiring a pumping device.

33. (Previously Presented) The process according to claim 31, wherein said separated liquid is introduced into said fluidized bed reactor at a position situated above said upper limit of said fluidized bed and below a velocity reduction zone.

34. (Previously Presented) The process according to claim 31, wherein said separated liquid is sprayed into said fluidized bed by an injection device.

35. (Previously Presented) The process according to claim 31, wherein said separated liquid comprises from 10 to 20% by weight of said gas entering said external pipe.

36. (Previously Presented) The process according to claim 29, wherein said external pipe has a diameter from 0.01 D_R to 0.15 D_R , wherein D_R is said fluidized bed reactor diameter.

37. (Previously Presented) The process according to claim 29, wherein at least one part of said condensed liquid enters said fluidized bed by passing through said distribution plate.

38. (Previously Presented) The process according to claim 29, wherein a gaseous stream is continuously passed through said fluidized bed, said gaseous stream comprises one or more monomers of formula $CH_2=CHR$, wherein R is hydrogen or a hydrocarbon radical having 1-12 carbon atoms.

39. (Previously Presented) The process according to claim 38, wherein said gaseous stream includes at least one C4-C8 alkane or cycloalkane as an inert condensable gas.

40. (Currently Amended) A continuous process for polymerizing olefins in a fluidized bed reactor, said process comprising:

- continuously passing a gaseous stream comprising one or more α -olefin monomers through a fluidized bed with a polymerization catalyst under reactive conditions;
- withdrawing a polymeric product and unreacted fluids from said fluidized bed reactor;
- cooling part of said unreacted fluids below at least one dew point of said unreacted fluids to form a two-phase mixture comprising a gas and a condensed liquid; and
- reintroducing said two-phase mixture into said fluidized bed reactor,

wherein said two-phase mixture is reintroduced under a distribution plate of said fluidized bed reactor such that at least one part of said condensed liquid is separated from said gas by a centrifugal effect forming a separated liquid, and said condensed liquid is fed above said fluidized bed through an external pipe connecting a bottom of said fluidized bed reactor to a position above an upper limit of

said fluidized bed, the external pipe comprising an inlet
below the distribution plate.

41. (Previously Presented) The process according to claim 40, wherein a separated liquid collects at a zone underlying said distribution plate before entering said external pipe.

42. (Previously Presented) The process according to claim 40, wherein a separated liquid enters said external pipe, said separated liquid comprises from 20 to 50% by weight of said condensed liquid.

43. (Previously Presented) The process according to claim 42, wherein said separated liquid flows upward in said external pipe without requiring a pumping device.

44. (Previously Presented) The process according to claim 42, wherein said separated liquid is introduced into said fluidized bed reactor at a position situated above said upper limit of said fluidized bed and below a velocity reduction zone.

45. (Previously Presented) The process according to claim 42, wherein said separated liquid is sprayed into said fluidized bed by an injection device.

46. (Previously Presented) The process according to claim 42, wherein said separated liquid comprises from 10 to 20% by weight of said gas entering said external pipe.

47. (Previously Presented) The process according to claim 40, wherein said external pipe has a diameter from 0.01 D_R to 0.15 D_R , wherein D_R is said fluidized bed reactor diameter.

48. (Previously Presented) The process according to claim 40, wherein at least one part of said condensed liquid enters said fluidized bed by passing through said distribution plate.

49. (Previously Presented) The process according to claim 40, wherein a gaseous stream is continuously passed through said fluidized bed, said gaseous stream comprises one or more monomers of formula $CH_2=CHR$, wherein R is hydrogen or a hydrocarbon radical having 1-12 carbon atoms.

50. (Previously Presented) The process according to claim 49, wherein said gaseous stream includes at least one C4-C8 alkane or cycloalkane as an inert condensable gas.

51. (Currently Amended) A continuous process for polymerizing olefins in a fluidized bed reactor, said process comprising:

- continuously passing a gaseous stream comprising one or more α -olefin monomers through a fluidized bed with a polymerization catalyst under reactive conditions;
- withdrawing a polymeric product and unreacted fluids from said fluidized bed reactor;
- cooling part of said unreacted fluids below at least one dew point of said unreacted fluids to form a two-phase mixture comprising a gas and a condensed liquid; and
- reintroducing said two-phase mixture into said fluidized bed reactor,

wherein said two-phase mixture is reintroduced under a distribution plate of said fluidized bed reactor such that at least one part of said condensed liquid is separated from said gas by a coalescence of liquid droplets and a consequent fall by gravity forming a separated liquid, and said condensed liquid is fed above said fluidized bed through an external pipe connecting a bottom of said fluidized bed reactor to a position above an upper limit of said fluidized

bed, the external pipe comprising an inlet below the distribution plate.

52. (Previously Presented) The process according to claim 51, wherein a separated liquid collects at a zone underlying said distribution plate before entering said external pipe.

53. (Previously Presented) The process according to claim 51, wherein a separated liquid enters said external pipe, said separated liquid comprises from 20 to 50% by weight of said condensed liquid.

54. (Previously Presented) The process according to claim 53, wherein said separated liquid flows upward in said external pipe without requiring a pumping device.

55. (Previously Presented) The process according to claim 53, wherein said separated liquid is introduced into said fluidized bed reactor at a position situated above said upper limit of said fluidized bed and below a velocity reduction zone.

56. (Previously Presented) The process according to claim 53, wherein said separated liquid is sprayed into said fluidized bed by an injection device.

57. (Previously Presented) The process according to claim 53, wherein said separated liquid comprises from 10 to 20% by weight of said gas entering said external pipe.

58. (Previously Presented) The process according to claim 51, wherein said external pipe has a diameter from 0.01 D_R to 0.15 D_R , wherein D_R is said fluidized bed reactor diameter.

59. (Previously Presented) The process according to claim 51, wherein at least one part of said condensed liquid enters said fluidized bed by passing through said distribution plate.

60. (Previously Presented) The process according to claim 51, wherein a gaseous stream is continuously passed through said fluidized bed, said gaseous stream comprises one or more monomers of formula $CH_2=CHR$, wherein R is hydrogen or a hydrocarbon radical having 1-12 carbon atoms.

61. (Previously Presented) The process according to claim 60,
wherein said gaseous stream includes at least one C4-C8
alkane or cycloalkane as an inert condensable gas.